

# Advancing the Use of Knowledge Organization Systems in Digital Libraries

## The 7th Networked Knowledge Organization Systems (NKOS) Workshop

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### ABSTRACT

This Networked Knowledge Organization Systems/Services (NKOS) workshop (the 7th in the series: <http://nkos.slis.kent.edu/>) will explore the integration of Knowledge Organization Systems (KOSs), such as classification schemes, thesauri, topic maps, and ontologies, into digital library architectures and services. This focus was developed after polling the NKOS listserv members for workshop topics.

Topics may include:

- Data and functional models required for the general use and interoperability of KOSs with digital libraries
- The development of a taxonomy of KOSs to support interoperability and integration that recognizes different KOS characteristics that impact their behavior in digital library settings
- The development of standard protocols and web services based on KOS types
- Methodologies and tools to support the development of digital library-friendly KOSs
- Identification of a research agenda to move forward

### Keywords

Controlled Vocabularies, Thesauri, Topic Maps, Ontologies, Networked Knowledge Organization Systems

### AIM AND OBJECTIVES

The primary aim of the workshop is to advance the usage of KOSs in digital library architectures and services by focusing on the requirements for interoperability and integration. Based on the outline for the NKOS session at JCDL 1998, this session will describe the current status of interoperability and integration, identify the ideal situation, and outline a possible research agenda to achieve the ultimate situation.

The workshop will provide a forum for researchers, practitioners, and developers working in both digital libraries and KOS areas. Presenters will be asked to contrast the current state of KOS integration in digital library systems to their vision

for the future and then present how their work will advance the usage of KOS in digital libraries. The objectives are to encourage sharing of successes and lessons learned and to identify collaborative development opportunities. The theme and objectives of this workshop reflect the goal of NKOS to develop a community of those who are working toward advancing the use of KOSs in networked environments.

### PROGRAM

*Session 1:* Welcome and introduction to NKOS and to the workshop

*Session 2:* Self-introductions and brief descriptions of projects and interests

*Session 3:* Series of presentations about the interoperability and integration of KOSs in digital libraries (approximately 3 presentations)

*Session 4:* Identification of components needed to achieve this integration and interoperability of KOSs with digital library architectures and services, and challenges to such integration, including standard protocols, registries, economic and intellectual property issues and methodologies, and tools to support appropriate KOS and digital library development

*Session 5:* Identification of a research agenda

### WORKSHOP FORMAT

The full-day workshop will include invited and volunteered short presentations. Presentations will be selected by the organizers. Presentations will be balanced with a significant amount of time for open discussion and networking opportunities. Participants will be encouraged to describe their own work in this area and will be given the opportunity to introduce their work and their interests briefly. The identification of necessary components and a research agenda will involve significant facilitated discussions.

### ATTENDEES

The workshop will be announced via the NKOS listserv, which now has over 100 members from more than 10 countries. In addition, other relevant listservs and groups, such as ASIST-L, ASIST SIG-CR, ECDL, Dig-Lib, ASI, and standards-related groups will be notified. Approximately 25-35 participants are expected, though the organizers would prefer not to limit attendance. If necessary, the participants will be accepted in the order of registration. As in the past, the organizers will work with the JCDL organizers to coordinate logistics and monitor registrations.

## WORKSHOP ORGANIZERS

*Gail Hodge*, Sr. Project Manager at Information International Associates, Inc., has been involved in the development and implementation of knowledge organization systems for the last 25 years. She has worked on numerous thesauri and classification schemes and more recently on taxonomies for NASA Goddard Space Flight Center and the Science.gov interagency Web site. She has written and presented numerous papers on related topics. Ms. Hodge has been on the organizing committee for NKOS for the last 6 years.

*Linda Hill* is a research specialist with the Alexandria Digital Library Project at the University of California at Santa Barbara - a federally-funded digital library project that focuses on georeferenced data and information. Her work focuses on the design and implementation of gazetteers and gazetteer services, the integration of KOS into digital library systems, the design of thesaurus and gazetteer protocols, and metadata issues such as collection-level metadata.

*Jian Qin* is Assistant Professor at the School of Information Studies, Syracuse University. Her research interests include knowledge organization structures and schema representations of digital information among others. She worked on a learning object vocabulary project as a visiting scholar at the Online Computer Library Center (OCLC) in 2002 and is focusing on metadata and vocabulary issues in learning objects. She has published widely in national and international research journals and was the co-editor for several special journal issues on knowledge discovery in databases and knowledge organization. Her research has been funded by the Institute for Scientific Information, OCLC, and Syracuse University. Jian Qin holds a Ph.D. from University of Illinois at Urbana-Champaign.

## PREVIOUS NKOS ACTIVITIES

This is the 7th in the series of NKOS workshops held in conjunction with the JCDL. Past topics have included protocols for networked KOSs, requirements for electronic thesauri, digital gazetteers, and moving traditional KOSs into semantic web concepts. Attendance has ranged from 15 to over 50 people. NKOS is an ad hoc working group of academics and practitioners interested in various knowledge organization systems in networked environments. The listserv, hosted by NSF DL2,

includes over 100 professionals from more than 10 countries. The NKOS Web site is hosted by Kent State Univ. NKOS-related sessions have been held at ASIST and ECDL. The ECDL and JCDL NKOS sessions have resulted in proceedings which are available from the NKOS Web site, and in special issues of the Journal of Digital Information.